# AUTOMATED WATER TREATMENT TRAILER FOR PROCESSING MULTIPLE FLUIDS SIMULTANEOUSLY

## CROSS REFERENCE TO RELATED APPLICATION

The current application claims priority to and the benefit of U.S. Provisional Patent Application Ser. No. 62/491,024 filed on Apr. 27, 2017, entitled "WATER TREATMENT TRAILER FOR AUTOMATICALLY PROCESSING MULTIPLE FLUIDS SIMULTANEOUSLY". This reference is hereby incorporated in its entirety.

## FIELD

The present embodiment generally relates to an automated water treatment trailer for automatically processing multiple fluids simultaneously.

## BACKGROUND

A need exists for a mobile system for processing multiple fluids simultaneously with fluid characteristics and specific gravity.

The present embodiments meet these needs.

## BRIEF DESCRIPTION OF THE DRAWINGS

The detailed description will be better understood in conjunction with the accompanying drawings as follows:

FIG. **1**A depicts the back view of an automated water treatment trailer connected to an adjacent structure according to one or more embodiments.

FIG. **1**B shows a perspective view of the automated water treatment trailer according to one or more embodiments.

FIGS. **1**C-**1**D depict another embodiment of the automated water treatment trailer.

FIG. **2**A depicts a detail of the plurality of pumps connected to the controller according to one or more embodiments

FIG. **2**B depicts a detail of a pump controller according to one or more embodiments.

FIG. **3** depicts a diagram of the trailer connected to a network for remote control of the trailer from client devices according to one or more embodiments.

FIG. **4** is a diagram of the steps of a method according to an embodiment.

The present embodiments are detailed below with reference to the listed Figures.

## DETAILED DESCRIPTION OF THE EMBODIMENTS

Before explaining the present apparatus in detail, it is to be understood that the apparatus is not limited to the particular embodiments and that it can be practiced or carried out in various ways.

Specific structural and functional details disclosed herein are not to be interpreted as limiting, but merely as a basis of the claims and as a representative basis for teaching persons having ordinary skill in the art to variously employ the present invention.

The present invention relates to an automated water treatment trailer for automatically processing multiple fluids simultaneously wherein each fluid has fluid characteristics and specific gravity.



The automated water treatment trailer that is also a secure locking trailer contains a frame with at least one axle, a tongue for connecting the frame to a tow vehicle.

The automated water treatment trailer stops casualties of operators by providing a portable shelter for the operator from sun, hailstorms, sandstorms, and lightening while in the field.

The automated water treatment trailer contains all fluids inside the trailer so that should a leak occur, the fluid is contained in the trailer and does not contact the ground causing ground contamination. The automated water treatment trailer stops environmental hazards from happening to the earth.

The automated water treatment trailer provides a safer way to pump chlorine dioxide as a liquid, and not as a highly volatile gas which is not only safer for the operators, and can prevent explosions proximate a well.

The automated water treatment trailer can also stop fires from occurring when gaseous chlorine dioxide is used, by simply having the chlorine dioxide as a liquid.

The automated water treatment trailer enables older workers to obtain shade and protection from the elements as they monitor the pumping process.

## SUMMARY OF THE INVENTION

The invention relates to a trailer that has a plurality of connected walls engaging the base are mounted to the frame.

A weather-proof top engages each of the plurality of connected walls opposite the frame forming an enclosure.

A pair of locking doors are mounted into one of the plurality of connected walls.

A plurality of discharge ports are mounted in one of the connected walls. Additionally, a plurality of suction ports equal to the quantity of discharge ports are mounted in one of the connected walls. Each suction port is connected to a chemical tote mounted on an adjacent structure.

A charging port is mounted in one of the connecting walls for charging a client device.

A skid can be mounted in the enclosure.

A plurality of pumps are mounted in the enclosure, such as to the skid, and connected in parallel.

A controller, such as a computer, is in communication with each of the pumps and a network.

The automated water treatment trailer has a plurality of pressure gauges. Each pressure gauge measures discharge fluid flowing to a pump and in communication with the controller.

A generator or other power supply is electrically connected to the plurality of pumps, the controller, and the charging port.

The automated water treatment trailer has a manifold to which is connected plurality of ball valves. Each ball valve is mounted to engage one of the plurality of suction ports. The manifold engages a water pipe.

In embodiments, the automated water treatment trailer has a plurality of back pressure valves. Each back pressure valve is mounted between one of the ball valves and a suction port. The secure locking trailer, when connected between a discharge fluid source and a water pipe, can automatically provide different fluid flows at remotely controllable pressures using fluid characteristics and specific gravity and pressure in the water pipe.

The following terms are used herein:

The term "automated" refers to a device that can run without human intervention other than start and stop.